City of Greenfield, California

WATER & SEWER RATE STUDY PRESENTATION

May 31, 2016

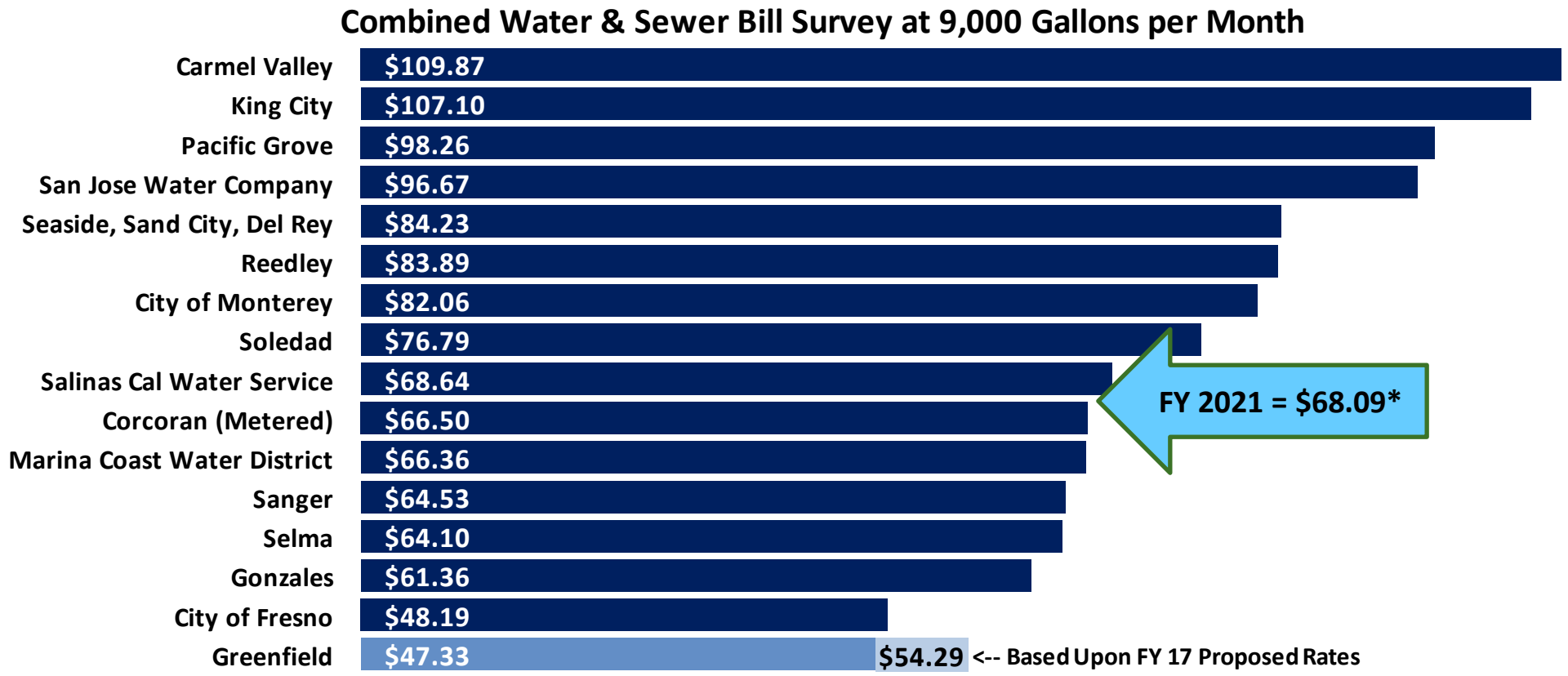
BURTON & ASSOCIATES
A Hawksley Consulting Company

Introduction & Scope

- Burton & Associates, a **Hawksley Consulting Company**
  - Financial management consultants for local government
  - Nationally recognized experts in utility regulations
  - AWWA Rates & Charges and authors of rate manuals

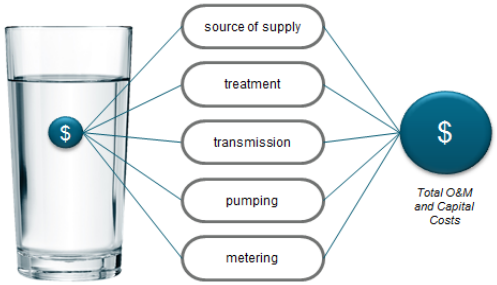
- Rate Study Scope
  - Prepare multi-year financial management plan
  - Perform cost-of-service analysis by customer class
  - Develop rate structure that meets all requirements
    - Legal, City policies, conservation goals, affordability, etc.

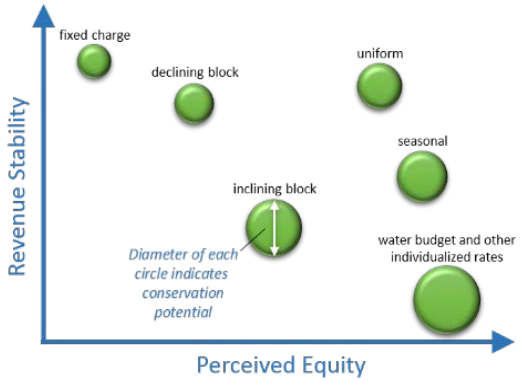
Current Monthly Residential Cost Comparison



* By 2021 many of these utilities will have also increased their rates.

Steps of the Rate Study Process





Revenue Requirements

- Operating Costs
- Capital Costs
- Financial Policies

Cost of Service Allocation

- Review Classes
- Fair/Equitable
- Compare to Revenues

Rate Design

- Set Objectives
- Identify Options
- Quantify Impacts

Executive Summary

- Status quo will not address infrastructure needs
  - Fund balance exhausted and in default on debt by FY 2018
  - Plan of annual revenue increases needed thru FY 2021
  - Comparable to national trends; rates remain very low
- Current rates generally reflect the cost to serve each class
- Rate structure modifications are recommended
  - Sewer: very minor changes
  - Water: modified inclining block rate structure for single family residential; flat rates for other customers
  - Result: defensible rate structure that meets system needs with minimal impacts to typical users

REVENUE REQUIREMENTS

Key Challenge and Financial Policies

- **Replacement of aging infrastructure per master plans**
  - Water System CIP (FY 17 – FY 22) = $10.2M
    - Requires new debt in FY 2021 of $4.0M
    - Annual cash funded CIP = $1.0M per year
  - Sewer System CIP (FY 17 – FY 22) = $5.8M
    - Requires new debt in FY 2017 of $3.2M
    - Annual cash funded CIP = $0.5M per year
- **Maintaining sufficient reserves in each fund**
  - Operating Reserve = 2 months of O&M budget
  - Renewal & Replacement Reserve = $500,000
  - Rate Stabilization Reserve (water only) = $500,000
- **Positive annual cash flow for long-term sustainability**

Water System Forecast: Diagnostic View

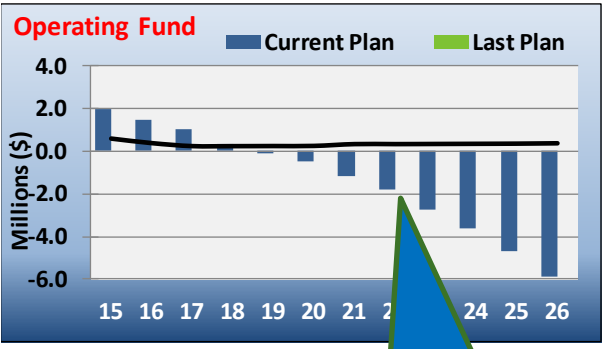
Assumes no rate increases during forecast period

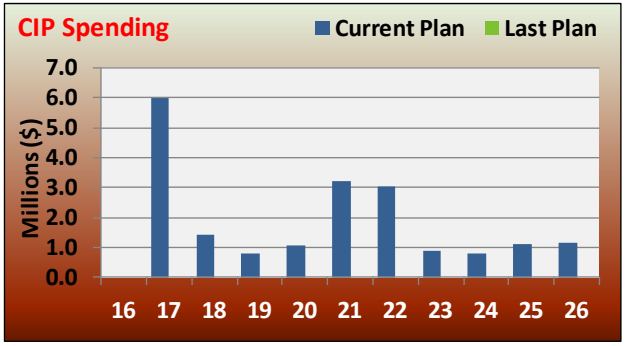
SAVE CALC ROLL

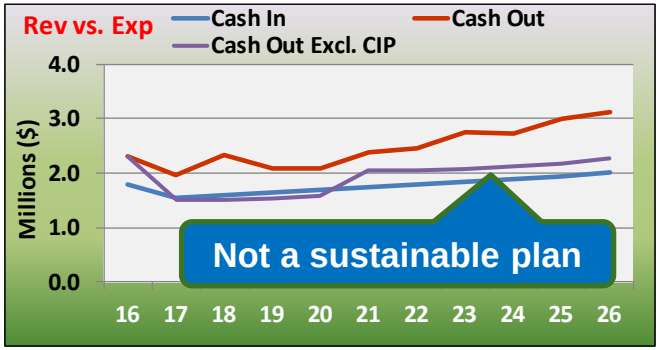
FINANCIAL ANA D MANAGEMENT SYSTEM (FAMS) SUMMARY

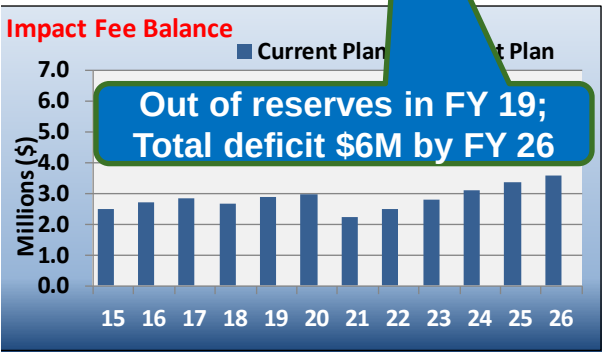
Greenfield Water System

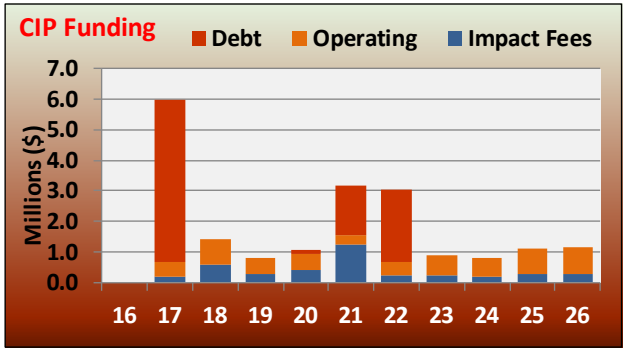
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Cumulative Change	
Water Rate Increases	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rate Covenant	5.95	1.53	1.55	1.59	1.62	0.99	1.03	1.04	1.04	1.04	0.99		

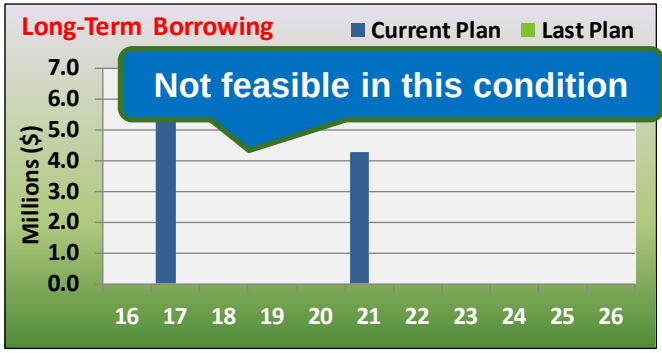












Water System Forecast: Recommended Plan

7% increase in FY 2017

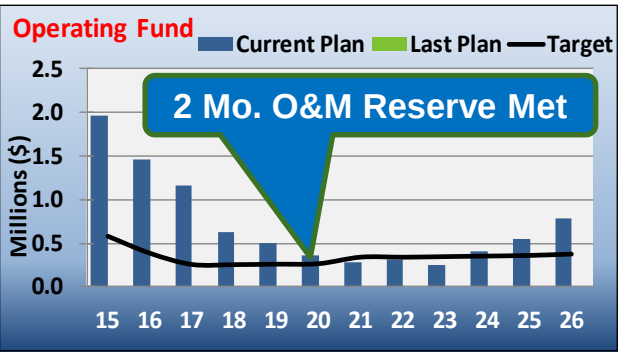
5% annual increases thereafter

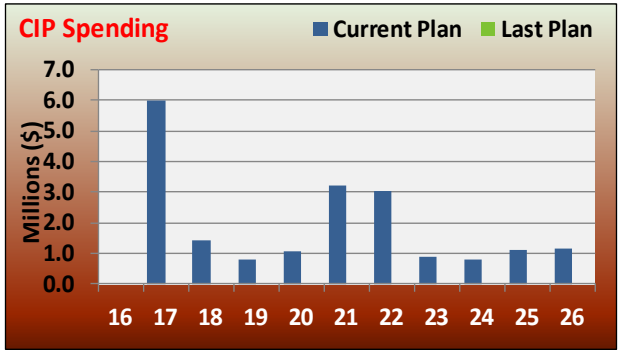
SAVE CALC ROLL

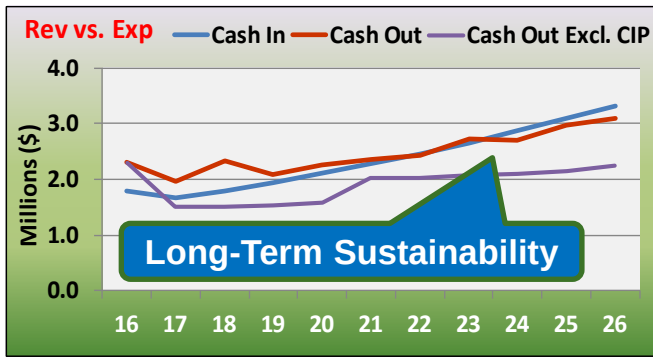
FINANC NALYSIS AND MANAGEMENT SYSTEM (FA MMARY

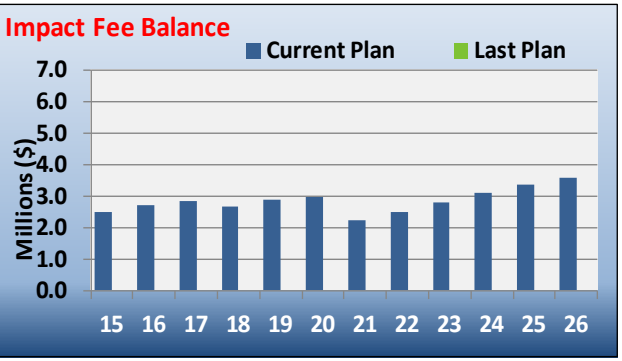
Greenfield Water System

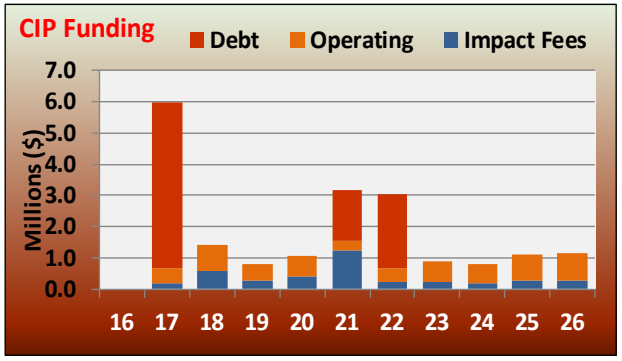
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Cumulative Change	
Water Rate Increases	0.00%	7.06%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	30.01%	66.09%
Rate Covenant	5.95	1.69	1.86	2.05	2.25	1.52	1.71	1.87	2.04	2.22	2.37		

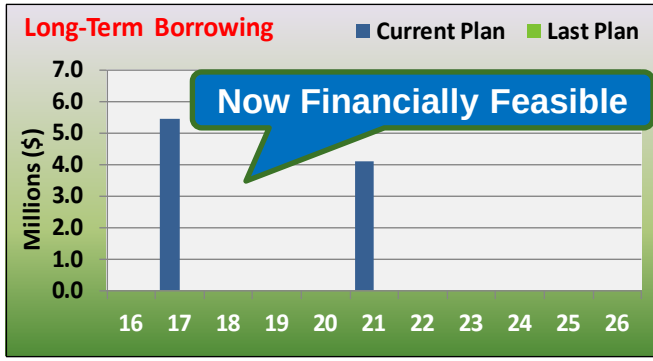












Sewer System Forecast: Diagnostic View

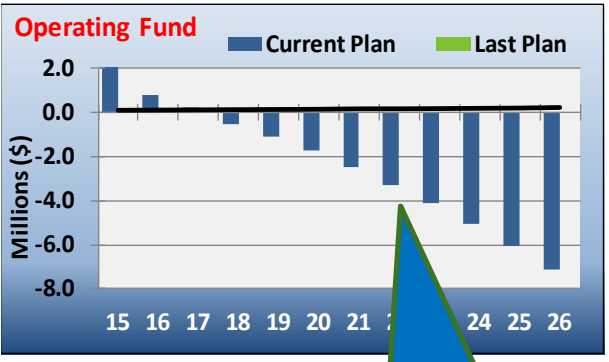
Assumes no rate increases during forecast period

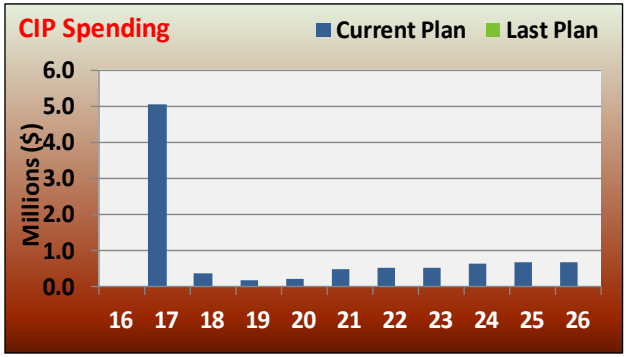
SAVE CALC ROLL

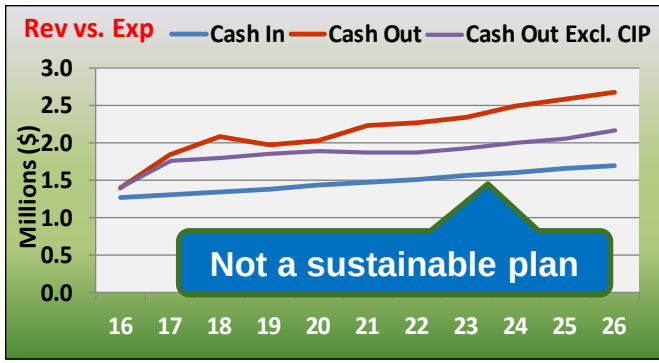
FINANCIAL ANA D MANAGEMENT SYSTEM (FAMS) SUMMARY

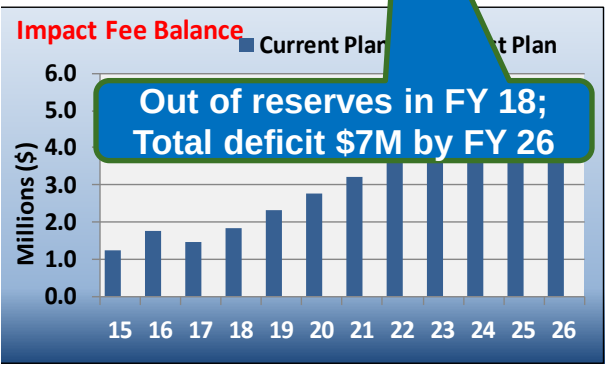
Greenfield Sewer System

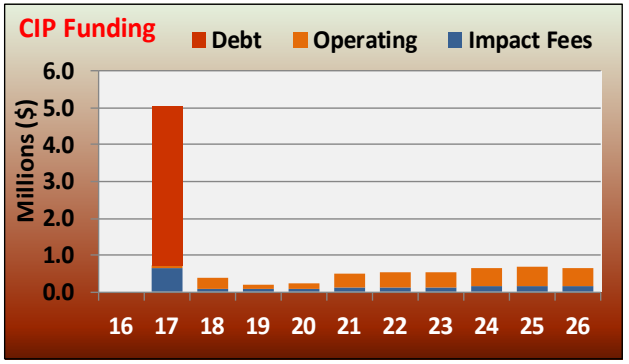
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Cumulative Change	
Sewer Rate Increases	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rate Covenant	4.23	1.05	1.05	1.05	1.05	0.95	1.01	0.98	0.94	0.90	0.75		

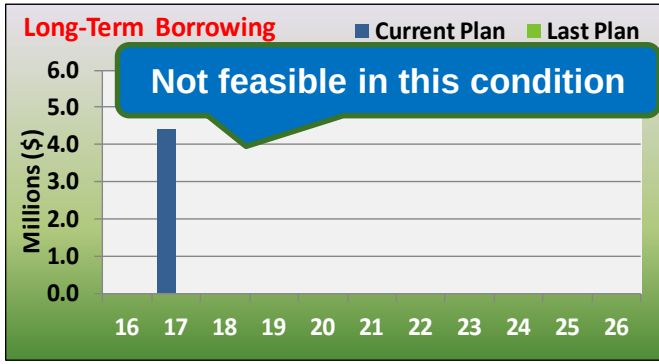












Sewer System Forecast: Recommended Plan

16% increase in FY 17 & 18

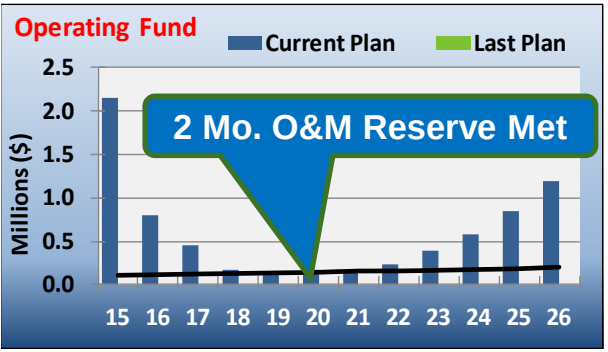
3.5% annual increases thereafter

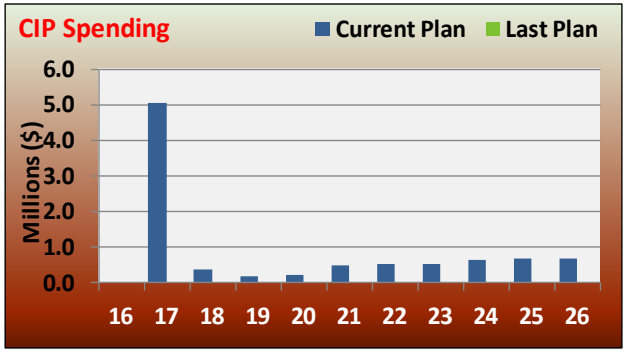
SAVE CALC ROLL

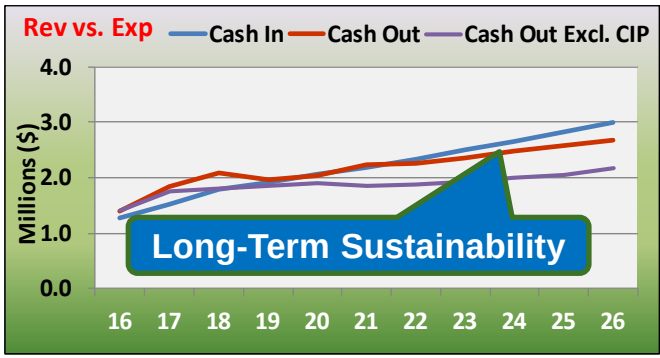
FINANCIAL ANALYSIS AND MANAGEMENT SYSTEM (F… SUMMARY

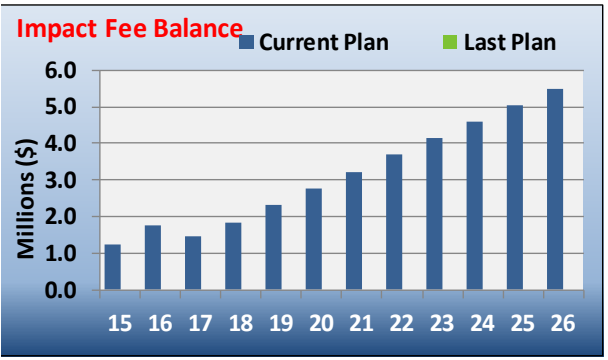
Greenfield Sewer System

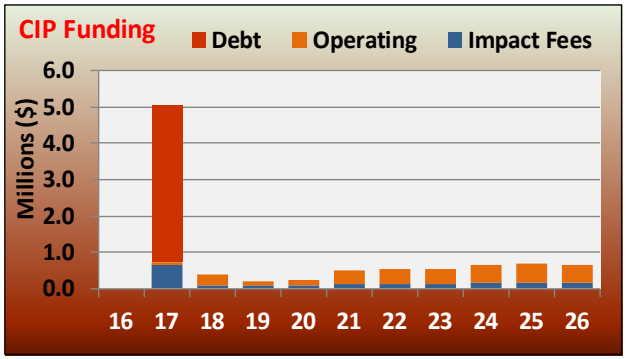
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Cumulative Change	
Sewer Rate Increases	0.00%	16.00%	16.00%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	49.19%	77.26%
Rate Covenant	4.23	1.46	1.96	2.14	2.32	2.44	2.72	2.93	3.15	3.39	3.55		

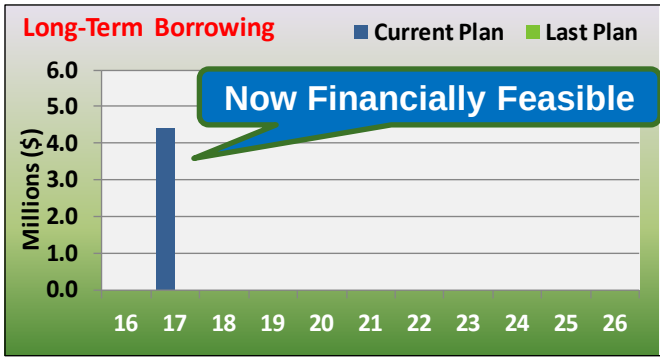










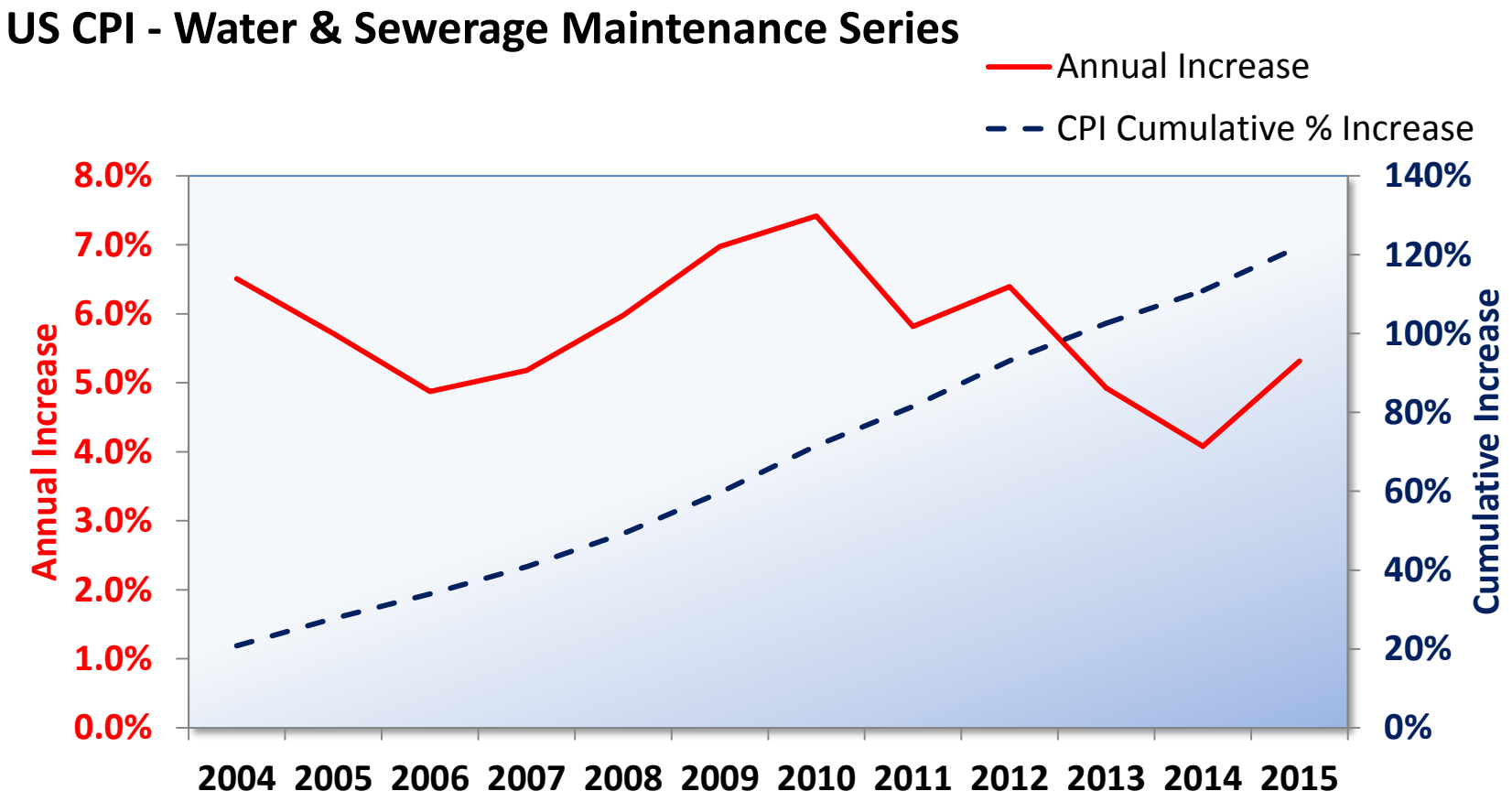


FINANCIAL MODEL DEMO

Impacts to Typical Residential User (9,000 gal)

¾" Meter	Current	FY 17	FY 18	FY 19	FY 20	FY 21
Water Bill	$22.53	$24.53	$25.76	$27.05	$28.40	$29.82
Sewer Bill	$24.80	$29.76	$34.52	$35.73	$36.98	$38.27
Total Bill	**$47.33**	**$54.29**	**$60.28**	**$62.78**	**$65.38**	**$68.09**
Change $		$6.96	$5.99	$2.50	$2.60	$2.71
Change %		14.71%	11.03%	4.15%	4.14%	4.14%

Comparison to National Trends



- Measures the national average change in the cost of water and sewer service to households
- Much more specific and relevant to utilities than overall CPI; 10-year avg. annual increase = 5.7%

$300
$200
$100

Water prices pay for treating, pumping, and delivering water, while sewer prices cover the cost of cleansing the water that goes down the drain.

Sewer prices are often higher than water prices because more energy and chemicals are required for treatment. Following the Clean Water Act, the federal government gave grants for new treatment plants during the 1970s and 1980s. Over the past three decades, however, new spending has been cut for local sewer infrastructure.

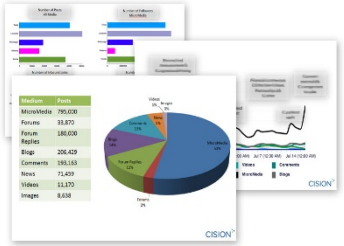
Stormwater fees are not included in every city's monthly bill. Some cities use general tax revenues to pay for projects to reduce polluted runoff from streets and parking lots. However, these projects must then compete for funds with other departments like police and schools.

Rates current as of April 1, 2015.
Monthly bill calculated for a family of four using 100 gallons per person per day.
Source: Circle of Blue research, based on utility water rates.

circle of blue

COST OF SERVICE ALLOCATION

Cost Allocation Process



Review Historical Customer Data

- Examine customer class usage
- Identify peak use

Evaluate Customer Classes

- Evaluate existing customer classes
- Water: Peaking factors and type of customer
- Sewer: Strength and volume
- Consider industry practices & local issues

Allocate Revenue Requirements

- Identify cost of service & offsetting revenue (misc. fees)
- Allocate to systems and then to functions
- Distribute costs to users in proportion to contribution to each system function

Analysis/Use of Output

- Compare allocations to current revenue
- Use as basis for setting rates by class
- Rate structure and/or level of rates unique to each class

Results: Allocation of Required Revenue By Customer Class for Setting New Rates

- Compared cost allocation to current revenue generation by class
  - Adjusted rate structure for each class consistent with cost of service
  - Takeaway: Only small adjustments as current rates are in-line with cost to serve

WATER	Single-Family Residential Rev (000's)	Multi-Family Residential Rev (000's)	Commercial/ Institutional Rev (000's)	Industrial Rev (000's)	Landscape/ Irrigation/ Rev (000's)	Total Rev (000's)
Current Rates	$1,237	$193	$130	$12	$76	**$1,648**
Cost of Service	$1,254	$182	$114	$9	$89	**$1,648**

SEWER	Single-Family Residential Rev (000's)	Multi-Family Residential Rev (000's)	Commercial/ Institutional Rev (000's)	Motel/Hotel Rev (000's)	Schools Rev (000's)	Total Rev (000's)
Current Rates	$1,117	$238	$89	$49	$17	**$1,509**
Cost of Service	$1,112	$218	$86	$25	$68	**$1,509**

RATE DESIGN

Recommended Rate Structure Modifications

WATER

- **Single Family Residential - Adjust tiers of inclining block rate structure:**
  - Tier 1 = Indoor use for typical family (0-8,000 gallons)
  - Tier 2 = Irrigation for typical property (8,001-15,000 gallons)
  - Tier 3 = All remaining water use (>15,000 gallons)
  - Rates reflect specific assignment of costs to each tier
    - i.e. proportional peaking costs to discretionary use in Tiers 2 and 3
- **Remove inclining block rate structure from other users**
  - Uniform or flat rate for each class based upon their cost of service
  - Wide variety of customer types and usage profiles that make conservation rates unequitable for various users

SEWER

- Isolate “account costs” in separate charge
- Update equivalency factors for certain non-single family users

Current v. Proposed Rates: Water Service

Monthly Customer Charge per Meter Size

Meter Size	Current Rates	Proposed Rates
5/8"	$14.03	$13.42
3/4"	$14.03	$14.80
1"	$15.64	$17.55
1 1/2"	$19.38	$24.42
2"	$23.04	$32.67
3"	$49.61	$54.68
4"	$60.89	$79.44
6"	$159.10	$148.20

Monthly Volume Charges

Current Usage Ranges All Customer Classes	Current Rates (per 1,000 gallons)	Proposed Usage Ranges SF Residential Customers	Proposed Rates (per 1,000 gallons)
0 – 5,000 gallons	$0.74	0 – 8,000 gallons	$1.17
5,001 – 10,000 gallons	$1.20	8,001 – 15,000 gallons	$1.75
10,001 – 15,000 gallons	$1.50	Over 15,000 gallons	$3.35
15,001 – 20,000 gallons	$1.76		
20,001 – 25,000 gallons	$1.85	**MF Residential Uniform Rate**	**$1.73**
Over 25,000 gallons	$2.77	**Commercial/Institutional Uniform Rate**	**$1.68**
		Industrial Uniform Rate	**$1.65**
		Irrigation/Landscape/Agriculture Uniform Rate	**$2.38**

Current v. Proposed Rates: Sewer Service

Current Rate Structure	Single-Family Residential	Multi-Family Residential	Commercial/ Institutional	Motel/Hotel	Schools
Fee per Equivalent Unit	$24.80	$24.80	$24.80	$24.80	$24.80
Eff. Fee Per Unit Over 1				$9.92	
Eff. Fee Per Unit Over 3		$14.88			

Proposed Rate Structure	Single-Family Residential	Multi-Family Residential	Commercial/ Institutional	Motel/Hotel	Schools
Per Account	$3.18	$3.18	$3.18	$3.18	$3.18
Eff. Fee per Unit	$26.58	$19.93	$26.58	$6.64	$26.58
Unit Equivalencies	1.0 per account	0.75 per unit	1.0 per assigned unit	0.25 per room/unit	1.0 per 20 students

Water & Sewer Bill Impacts: Single-Family Residential Users (3/4” Meter)

Monthly Use (Gal)	# of Bills	% of Bills	Agg. %	Current Total	Proposed Total	$ Chg.	% Chg.
0	5,143	17.9%	17.9%	$38.83	$43.18	$4.35	11.2%
1,000	615	2.1%	20.0%	$39.57	$44.35	$4.78	12.1%
2,000	722	2.5%	22.5%	$40.31	$45.52	$5.21	12.9%
3,000	914	3.2%	25.7%	$41.05	$46.69	$5.64	13.7%
4,000	1,363	4.7%	30.4%	$41.79	$47.86	$6.07	14.5%
5,000	1,613	5.6%	36.0%	$42.53	$49.03	$6.50	15.3%
6,000	1,826	6.3%	42.3%	$43.73	$50.20	$6.47	14.8%
7,000	1,936	6.7%	49.1%	$44.93	$51.37	$6.44	14.3%
8,000	1,880	6.5%	55.6%	$46.13	$52.54	$6.41	13.9%
9,000	1,749	6.1%	61.7%	$47.33	$54.29	$6.96	14.7%
10,000	1,632	5.7%	67.3%	$48.53	$56.04	$7.51	15.5%
15,000	796	2.8%	86.2%	$56.03	$64.79	$8.76	15.6%
20,000	301	1.0%	94.1%	$64.83	$81.54	$16.71	25.8%
40,000	11	0.0%	99.7%	$115.63	$148.54	$32.91	28.5%
60,000	2	0.0%	99.9%	$171.03	$215.54	$44.51	26.0%

Example Water & Sewer Bill Impacts: Multi-Family Residential Users

Meter Size	% of Customers	Meter Size	Units	Typical Mtly Usage (Gal)	Current Total	Proposed Total	$ Chg.	% Chg.
5/8"	76.4%							
Large User		5/8"	6.00	60,000	$265.27	$240.01	$11.60	4.4%
Average User		5/8"	4.00	24,000	$136.71	$137.86	$1.15	0.8%
Low Volume User		5/8"	2.00	5,000	$67.33	$65.12	-$2.21	-3.3%
1"	21.8%							
Large User		1"	28.00	250,000	$1,120.54	$1,011.38	-$109.16	-9.7%
Average User		1"	10.00	50,000	$298.70	$306.57	$7.87	2.6%
Low Volume User		1"	5.00	10,000	$129.50	$137.70	$8.20	6.3%
1 1/2"	0.3%							
Large User		1 1/2"	15.00	165,000	$695.39	$612.06	-$83.33	-12.0%
Average User		1 1/2"	3.00	65,000	$239.83	$199.85	-$39.98	-16.7%
Low Volume User		1 1/2"	2.00	16,000	$87.94	$95.15	$7.21	8.2%
4"	0.9%							
Large User		4"	30.00	233,000	$1,148.46	$1,083.73	-$64.73	-5.6%
Average User		4"	15.00	100,000	$556.85	$554.63	-$2.22	-0.4%
Low Volume User		4"	5.00	47,000	$261.24	$263.60	$2.36	0.9%

Example Water & Sewer Bill Impacts: Smaller Commercial Users

Meter Size	% of Commercial Customers	Meter Size	Units	Typical Mtly Usage (Gal)	Current Total	Proposed Total	$ Chg.	% Chg.
5/8"	56.4%							
Large User		5/8"	1.00	60,000	$171.03	$143.98	-$27.05	-15.8%
Average User		5/8"	1.00	24,000	$72.23	$83.50	$11.27	15.6%
Low Volume User		5/8"	1.00	10,000	$48.53	$59.98	$11.45	23.6%
3/4"	1.8%							
Large User		3/4"	1.00	92,000	$259.67	$199.12	-$60.55	-23.3%
Average User		3/4"	1.00	26,000	$76.85	$88.24	$11.39	14.8%
Low Volume User		3/4"	1.00	9,000	$47.33	$59.68	$12.35	26.1%
1"	13.5%							
Large User		1"	2.00	118,000	$358.10	$272.13	-$85.97	-24.0%
Average User		1"	2.00	48,000	$164.20	$154.53	-$9.67	-5.9%
Low Volume User		1"	1.00	20,000	$66.44	$80.91	$14.47	21.8%
1 1/2"	9.8%							
Large User		1 1/2"	2.00	165,000	$492.03	$357.96	-$134.07	-27.2%
Average User		1 1/2"	1.00	65,000	$190.23	$163.38	-$26.85	-14.1%
Low Volume User		1 1/2"	1.00	16,000	$63.14	$81.06	$17.92	28.4%

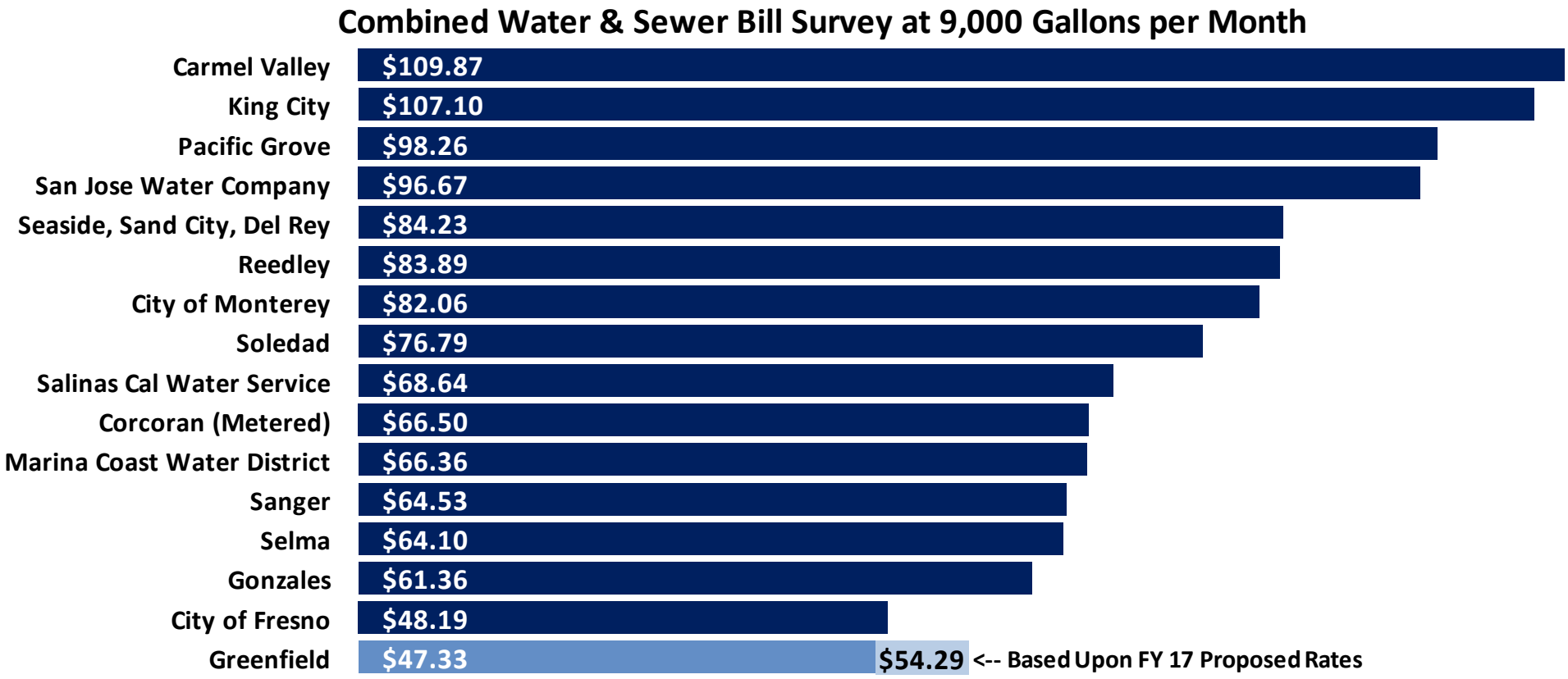
Example Water & Sewer Bill Impacts: Larger Commercial Users

Meter Size	% of Commercial Customers	Meter Size	Units	Typical Mtly Usage (Gal)	Current Total	Proposed Total	$ Chg.	% Chg.
2"	12.3%							
Large User		2"	7.00	717,000	$2,148.73	$1,426.46	-$722.27	-33.6%
Average User		2"	4.00	80,000	$309.84	$276.57	-$33.27	-10.7%
Low Volume User		2"	1.00	27,000	$88.63	$107.79	$19.16	21.6%
3"	3.7%							
Large User		3"	2.00	278,000	$835.27	$578.06	-$257.21	-30.8%
Average User		3"	1.00	45,000	$165.06	$160.04	-$5.02	-3.0%
Low Volume User		3"	1.00	20,000	$100.41	$118.04	$17.63	17.6%
4"	1.8%							
Large User		4"	5.00	233,000	$796.30	$606.96	-$189.34	-23.8%
Average User		4"	3.00	100,000	$378.29	$330.36	-$47.93	-12.7%
Low Volume User		4"	1.00	47,000	$181.88	$188.16	$6.28	3.5%
6"	0.6%							
Large User		6"	9.00	2,372,000	$6,918.74	$4,375.55	-$2,543.19	-36.8%

Water Bill Impacts: Irrigation/Landscape Service (3” Meter)

Monthly Use (Gal)	# of Bills	% of Bills	Agg. %	Current Water	Proposed Water	$ Chg.	% Chg.
0	43	65.2%	65.2%	$49.61	$54.68	$5.07	10.2%
1,000	4	6.1%	71.2%	$50.35	$57.06	$6.71	13.3%
2,000	9	13.6%	84.8%	$51.09	$59.44	$8.35	16.3%
3,000	-	0.0%	84.8%	$51.83	$61.82	$9.99	19.3%
4,000	-	0.0%	84.8%	$52.57	$64.20	$11.63	22.1%
5,000	1	1.5%	86.4%	$53.31	$66.58	$13.27	24.9%
6,000	1	1.5%	87.9%	$54.51	$68.96	$14.45	26.5%
7,000	2	3.0%	90.9%	$55.71	$71.34	$15.63	28.1%
8,000	-	0.0%	90.9%	$56.91	$73.72	$16.81	29.5%
9,000	1	1.5%	92.4%	$58.11	$76.10	$17.99	31.0%
10,000	-	0.0%	92.4%	$59.31	$78.48	$19.17	32.3%
15,000	-	0.0%	92.4%	$66.81	$90.38	$23.57	35.3%
20,000	-	0.0%	92.4%	$75.61	$102.28	$26.67	35.3%
40,000	-	0.0%	92.4%	$126.41	$149.88	$23.47	18.6%
60,000	-	0.0%	97.0%	$181.81	$197.48	$15.67	8.6%
80,000	-	0.0%	98.5%	$237.21	$245.08	$7.87	3.3%
100,000	-	0.0%	100.0%	$292.61	$292.68	$0.07	0.0%

Current Monthly Residential Cost Comparison



Many of these utilities are expected to have increases similar to those proposed for Greenfield, resulting in the City continuing to have some of the lowest rates in the area.

Remaining Schedule

Steps:	Timeframe:
1. Initial workshop with City Council	5/31/16
2. Perform adjustments and prepare notification of public hearing	By 6/5/16
3. Mail notification of public hearing to customers	6/6/16
4. Provide Final Report, schedules, and other supporting docs.	By 7/12/16
5. Public hearing of ordinance with new rates	7/26/16
6. Implementation date of new rates	8/1/16

DISCUSSION